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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,727	07/28/2003	Kazunori Inoue	1082.1061	7084

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EXAMINER

HODGES, MATTHEW P

ART UNIT PAPER NUMBER

2879

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,727

Applicant(s)

INOUE ET AL.

Examiner

Matt P. Hodges

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 9-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/22/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I in the reply filed on 1/10/2005 is acknowledged.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Specifically the title should be directed to an aspect of the claimed invention to distinguish from other plasma display panels.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 14 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Uemura et al. (US 6,650,063).

Regarding claims 1, 4, and 14, Uemura discloses (See Figure 1), a gas discharge panel including a front substrate (21), electrodes (22 and 23) formed on the substrate, a dielectric layer (26) of low melting point glass formed on the substrate and electrodes, and a protection layer

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²¹⁴
(27~~4~~) formed on the dielectric layer. (Column 5 lines 20-36). The protection layer has a bi-layer structure where it includes both MgO and TiO₂. (Column 3 lines 27-38).

Regarding claim 3, the protective layer composed of a bi-layer of TiO₂ has a bandgap less than 6.2 eV.

Regarding claim 2, a protective layer composed of a bi-layer TiO₂ layer would not transmit light of 200nm or less.

Regarding claims 5, 8, and 15, Uemura alternatively discloses (See Figure 1), a gas discharge panel including a front substrate (21), electrodes (22 and 23) formed on the substrate, a dielectric layer (26) of low melting point glass formed on the substrate and electrodes, an intermediate layer (27-1) formed on the dielectric layer, and a protection layer (27-2) formed on the intermediate layer. (Column 5 lines 20-36). The protection layer is composed of MgO while the intermediate layer is composed for TiO₂. (Column 3 lines 27-38).

Regarding claim 6, the intermediate layer composed of TiO₂ has a bandgap less than 6.2 eV.

Regarding claim 7, a TiO₂ layer would not transmit light of 200nm or less.

Claims 1-3, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Katou et al. (US 2002/0121861).

Regarding claims 1, and 14, Katou discloses (See Figure 1), a gas discharge panel including a front substrate (9), electrodes (7 and 8) formed on the substrate, a dielectric layer (6) formed on the substrate and electrodes, and a protection layer (5) formed on the dielectric layer.

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(Page 2 paragraphs 30-33). The protection layer is composed of both MgO and TiO₂. (Page 2 paragraphs 22 and 23).

Regarding claim 3, the protective layer including TiO₂ has a bandgap less than 6.2 eV.

Regarding claim 2, a protective layer including TiO₂ layer would not transmit light of 200nm or less.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Miyashita et al. (US 2004/0075388) discloses the use of an interlayer of AlN between the protection layer and the dielectric layer.

Hirano et al. (US 2003/0030377) discloses the use of an MgO protection layer with the inclusion of Zn Ions.


Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (571) 272-2454. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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JOSEPH WILLIAMS
PRIMARY EXAMINER